

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-4. (Canceled)

5. (Currently Amended) A system comprising:

a point-of-use process chamber including a drain and configured to apply a plating solution to plate one or more wafers by spray, microcell, or spin on;

a plurality of tanks to separately hold ~~a metal and one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent~~ constituent chemicals of the plating solution; and

a piping system having a plurality of segments, including a plurality of in-line heaters for a subset of the segments, to separately route, in-line heat, and after heating, mix, at a mixing point, the constituent chemicals of the plating solution to form the plating solution, substantially just prior to application to the one or more wafers, ~~the metal and the one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent;~~ and

a system controller configured to receive results of a qualification analysis of the plating solution and control a supply to the mixing point of the constituent chemicals based on the qualification analysis.

6. (Original) The system of claim 5, wherein the plurality of tanks comprise a tank to store a selected one of Co, Cu, Ni, Fe, Ag, Au, Pt, Pd and Ru.

7. (Previously Presented) The system of claim 5, wherein the plurality of tanks comprise a tank to store one of a selected one of a citric acid and EDTA to be used as a complex agent, a selected one of NH₄Cl and a boric acid to be used as a buffer, a

selected one of KOH and TMAH to be used at a pH adjuster, or a selected one of DMAB, hypophosphite, formaldehyde, and glyoxylic acid to be used as a reducing agent.

8. (Previously Presented) The system of claim 5, wherein the in-line heaters are capable of in-line heating the metal and the one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent to an application temperature in a range of 30°C - 90°C.

9-40. (Canceled)

41. (Previously Presented) The system of claim 5, wherein the plurality of tanks are configured to separately hold the metal and the one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent at room temperature.

42. (New) The system of claim 5, wherein the system controller is configured to interface with the plurality of tanks and the plurality of in-line heaters.